

REMARKS

This paper is responsive to the Office Action mailed from the Patent and Trademark Office on February 23, 2005, which has a shortened statutory period set to expire May 23, 2005. A two-month extension, extending the period of response to July 23, 2005, is submitted in a petition filed herewith.

Claims 1-20 are pending in the above-identified application. Claims 11, 13 and 17 are rejected under 35 USC 112, Claims 1-11 and 14-20 are rejected under 35 USC 102(b), and Claims 12 and 13 are rejected under 35 USC 103(a).

In the current paper, Claims 11, 13 and 17 are amended solely in response to the rejections under 35 USC 112. No new matter is entered. In view of these amendments and the following remarks, Applicants respectfully request reconsideration and withdrawal of all pending claims.

Rejections Under 35 USC 112

Claims 11 and 13 are rejected under 35 USC 112, second paragraph. Regarding Claims 11 and 13, the Examiner writes:

4. Claims 11 and 13 recites the limitation "reception component" in line 2 of claim 11 and line 3 of claim 13. There is insufficient antecedent basis for this limitation in the claim. The examiner interprets "reception component" to be "monitor component" which is consistent with the language of previous claims.

In response to this rejection, and in accordance with the Examiner's helpful comment, Claims 11 and 13 are amended to change "reception component" to "monitor component". No new matter is entered.

Claim 17 is also rejected under 35 USC 112, second paragraph. The Examiner writes:

5. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 17 recites the limitation " wherein second surface extends between the first surface and the second surface" in line 6. The Examiner interprets the limitation to read as follows "wherein third surface extends between the first surface and the second surface".

In response to this rejection, Claim 17 amended to recite "wherein the second surface extends between the first surface and the third surface". Support for this amendment is shown, for example, in Applicant's Fig. 1, where second (oblique) surface 2 extends between first surface 102 and third surface 101. No new matter is entered.

For the above reasons, Applicants' respectfully request reconsideration and withdrawal of the rejections under 35 USC 112.

Rejections Under 35 USC 102

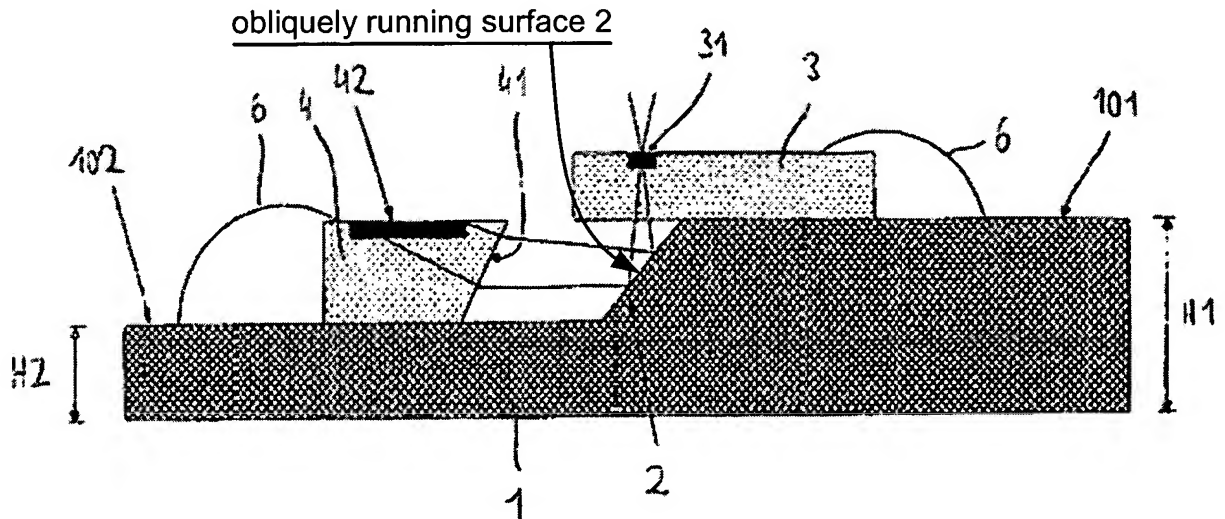
Claims 1-11 and 14-20 are rejected under 35 USC 102(b) as being anticipated by U.S. Patent No. 6,097,521 (herein "Althaus").

Claim 1 recites (in pertinent part):

...the transmission component and the monitor component are arranged on a carrier substrate having an upper surface and at least one surface area which extends obliquely with regard to the upper surface, and wherein **the obliquely extending surface area deflects onto the monitor component the part of the radiation emitted by the transmission component which is to be detected by the monitor component.**

This structure is shown, for example, in Applicant's Fig. 1 (reproduced below for reference), which shows a planar carrier substrate 1 which forms two plane regions 101, 102 having

different heights $H1$, $H2$ and are connected by an obliquely running surface area 2. Applicant respectfully points out that "oblique" is commonly defined as "neither perpendicular nor parallel: having a slanting direction or position/inclined". Obliquely running surface area 2 is clearly inclined relative to plane regions 101, 102, and thus meets the common definition of "oblique".



The benefit provided by this arrangement is discussed, for example, in paragraph 0008 (page 3):

[0008] The solution according to the invention provides a simple construction and a cost-effective solution. The transmission component and the monitor component may be arranged as separate elements or submodules on the carrier substrate. A reflective surface area for beam deflection is integrated into the planar carrier substrate itself, so that the optical arrangement manages with few components despite spatial separation of transmission component and monitor component.

In rejecting Claim 1, the Examiner writes (in relevant part; see page 3, paragraph 7 of the Office Action):

...wherein the obliquely extending surface area (31)

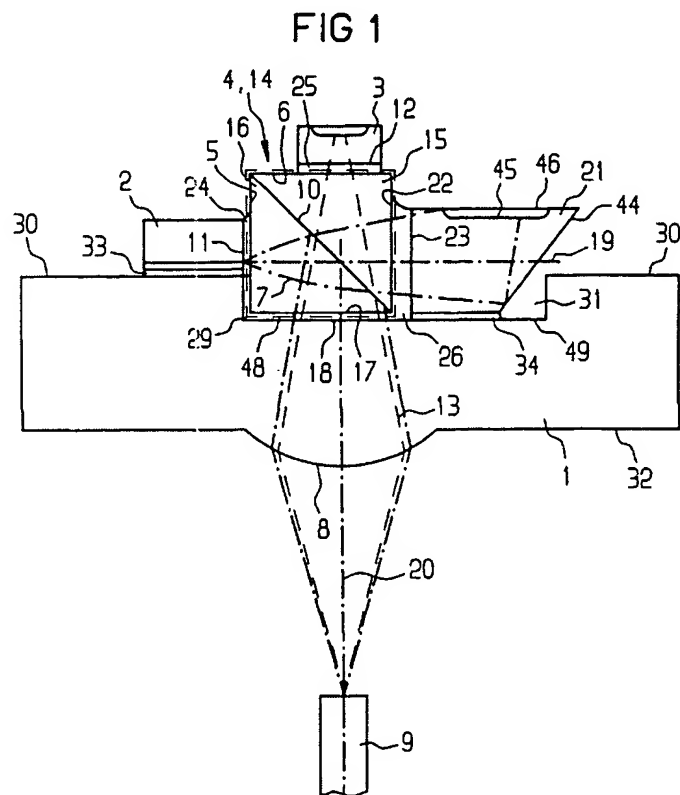
deflects onto the monitor component (21) the part of the radiation emitted by the transmission component (2) which is to be detected by the monitor component (21) (figure 1 and col. 6, lines 13-17).

Applicant respectfully traverses the Examiner's arguments that (a) surface 31 is an "obliquely extending surface area", and (b) "surface (31) deflects onto the monitor component (21) the part of the radiation emitted by the transmission component (2) which is to be detected by the monitor component (21)". As illustrated in Althaus' Fig. 1 (reproduced below along with relevant text from columns 6 and 7), recess 31 is a trench-like

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10 Referring now to the figures of the drawing in detail and first, particularly, to FIG. 1 thereof, there is seen an opto-electronic module according to the invention. A recess 31 is formed on a first main surface 30 of a support part 1, and a radiation focusing device 8 to focus radiation, in this case,
15 a spherical, convergent lens, is formed on a second main surface 32 of support part 1 opposite the first main surface 30. A prism cube 14 is fastened on the bottom surface 49 of recess 31 by means of a radiation-transparent bonding agent
20 29, for example, a transparent glue, as beam splitter 4. The

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A monitor diode 21 is attached on the side of the prism cube 14 opposite the transmitting component 2 also in recess 31 of support part 1 by means of a bonding agent 34, for example, a metal solder or glue. This monitor diode 21

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A side surface 44 of monitor diode 21 opposite the monitor diode beam input surface 23 is beveled so that it reflects at least a part of the radiation penetrating the monitor diode 21 to a pn-junction 45 of monitor diode 21 that detects radiation. It includes an angle smaller than 90°, with a side surface 46 of the monitor diode lying closest to pn-junction 45. In addition, it can be provided with a reflection-increasing layer.



opening formed in "support part" 1, and clearly does not include an oblique surface. Further, no part of recess 31 reflects the portion of light detected by monitor diode 21. Instead, a portion of the transmitted light is reflected by inclined surface formed on a prism cube 14 and a monitor diode, both of which are

secured in recess 31 by a bonding agent (as set forth in the text from columns 6 and 7, reproduced above). Specifically, light is reflected from prism cube 14 to a side surface 44 of monitor diode 21, which is beveled to reflect light to a pn-junction 45 of monitor diode 21. That is, side surface 44 is clearly part of monitor diode 21, not support structure 1. Accordingly, Althaus fails to anticipate the structure of Claim 1 in that Althaus fails to teach or suggest "a carrier substrate having an upper surface and at least one surface area which extends obliquely with regard to the upper surface, and wherein the obliquely extending surface area deflects onto the monitor component the part of the radiation emitted by the transmission component which is to be detected by the monitor component" as recited in Claim 1.

Claims 2-11, 14 and 15 are dependent from Claim 1, and are therefore distinguished over Althaus for at least the reasons provided above with reference to Claim 1.

Similar to Claim 1, independent Claim 16 recites (in relevant part):

- ...a substrate including a first surface defining a first plane and a second surface defining a second plane that extends obliquely relative to the first plane;
- a transmission component mounted on the first surface for emitting radiation such that a portion of the emitted radiation is reflected by the second surface; and
- a monitor component mounted on the substrate and positioned to receive the reflected portion of the emitted radiation.

For reasons similar to those discussed above with reference to Claim 1, Althaus fails to anticipate the structure of Claim 16 in that Althaus fails to teach or suggest "substrate including a first surface defining a first plane and a second surface defining a second plane that extends obliquely relative to the first plane" and "a transmission component mounted on the first surface for emitting radiation such that a portion of the emitted radiation is reflected by the second surface; and a monitor

component mounted on the substrate and positioned to receive the reflected portion of the emitted radiation" as recited in Claim 16.

Claims 17-20 are dependent from Claim 16, and are therefore distinguished over Althaus for at least the reasons provided above with reference to Claim 16.

For the above reasons, Applicant respectfully requests reconsideration and withdrawal of the rejections under 35 USC 102.

Rejections Under 35 USC 103

Claims 12 and 13 are rejected under 35 USC 103(a) as being obvious in view of Althaus.

Claims 12 and 13 are dependent from Claim 11, and are therefore distinguished over Althaus for at least the reasons provided above with reference to Claim 1.

For the above reasons, Applicant respectfully requests reconsideration and withdrawal of the rejections under 35 USC 103.

CONCLUSION

For the above reasons, Applicant believes Claims 1-20 are in condition for allowance. Should the Examiner have any questions regarding the present paper, the Examiner is invited to contact the undersigned attorney at the number provided below.

Respectfully submitted,



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I hereby certify that this correspondence is being deposited with the United States Postal Service as FIRST CLASS MAIL in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450, on July 6, 2005.

Date: 7/6/2005 Signature: 